

Agricultural Marketing Service
Cotton Division
Grading Branch
Classing Office
Instrument Mechanic Helper, WG-3359-05
HVI Technician

SJ CN27

I. INTRODUCTION

The Classing Office administers assigned programs on cotton, cottonseed, cotton linters, and related commodities provided for in legislative and administrative requirements in connection with standards, marketing services, and allied regulatory responsibilities.

The incumbent serves as an Instrument Mechanic Helper, responsible for assisting the Instrument Mechanic by making standard repairs on High Volume Instruments such as functional checkouts of mechanical, electrical or pneumatic components, assemblies, and other devices of the instruments.

II. RESPONSIBILITIES

Performs routine repairs and monitors functional performance of various components and devices of HVIs such as pressure gauges, gear assemblies, transducers, fibrosamplers, and other devices which may require adjustments and contain interaction between components which complicate repair and test procedures.

Performs standard checks for proper vacuum pressures, temperatures, voltage, and other parameters related to the operations of HVIs.

Determines whether to replace or repair defective parts. Consults with an instrument worker on the proper interpretation of diagnostic evaluations and what corrective procedures to apply. Performs handwork, such as grinding, filing and shimmying to obtain correct assembly and finish of equipment.

Assists an instrument worker in the repair and replacement of parts, using precision measurement instruments such as voltmeters, oscilloscopes, pneumatic gauges, reading schematics, analyzers and other devices necessary to keep instruments in proper working condition.

Performs visual checks on gauges; reviews software information, insures cables are plugged in properly, circuit boards are seated properly, and filters are installed properly; and conducts runs of the HVIs in the off-line mode.

III. SKILLS AND KNOWLEDGE

Ability to detect problems and assist the Instrument Mechanic in the repair and maintenance of a variety of functional, electrical, mechanical, and/or pneumatic components on HVIs, such as broken wires, work gears, and defective contacts.

Ability to learn the manufacturer's prescribed preventive maintenance requirements in order to perform routine maintenance checks on instruments.

Ability to solder wire connections and check for proper seating of circuitry boards which are common defects that occur on HVI instruments.

Ability to perform handwork such as grinding, filing, and shimmying to obtain the correct assembly and finishes of equipment.

Ability to operate standard measuring devices to maintain correct tolerance levels and accurate dimensions.

Ability to interpret manufacturer's operating manuals and wiring schematics for electronic boards in the two different makes of HVIs.

IV. PHYSICAL EFFORT

The employee stands almost constantly, bending, squatting, and kneeling to make repairs on the HVIs. The safety risk to the employee is considered minimal.

V. WORKING CONDITIONS

The HVI technician works in well-lighted, heated, and ventilated areas. Ventilation and filtering is required to control cotton dust. The work involves cleaning solvents and lubricants which may expose the worker to toxic fumes, and the worker may be subject to cuts, bruises, and abrasions from operating hand and power tools and equipment.

VI. JOB CONTROLS

A. Supervision and Guidance Received: The employee receives assignments from the supervisor by oral instructions and specific detailed instructions from an instrument mechanic. The helper carries out simple assignments independently; determines the work methods and the tools and testing equipment needed to accomplish the task. The employee's judgment and decisions must be within the prescribed procedures and instructions outlined by the instrument mechanic.

B. Responsibility for the work of Others: The incumbent frequently provides technical assistance to HVI operators and HVI line supervisors in helping them perform their jobs more proficiently.